



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/435,448 11/22/99 YAMADA

Y 056857

MM91/0912
SUGHRUE MION ZINN MACPEAK AND SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20037

EXAMINER

GRAYBILL, D

ART UNIT

PAPER NUMBER

2814

DATE MAILED:

09/12/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/435,448

Applicant(s)

YAMADA, YASUYOSHI

Examiner

David E Graybill

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2814

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-12 the scope of the term "type" cannot be determined because the common qualities that distinguish the individual members as an identifiable class are not recited in the claims, and they cannot otherwise be determined.

In claim 7, the limitations, "a back electrode type electronic part comprising:" and, "a circuit board having substrate electrodes corresponding to said electrodes provided for said electronic part" are incompatible because the electronic part cannot comprise the circuit board when the circuit board is separate and distinct from the electronic part.

The following lack sufficient literal antecedent basis:

Claim 1, "said electrodes arranged other than said corner portions, "said corner portions";

Claims 1 and 3, "said group of electrodes";

Claims 4-7 and 9-12, "said group";

Art Unit: 2814

Claim 7, "said electrodes having a substantially same potential level when said circuit operates, and, "said electrodes of said electronic part other than said integrated electrodes."

In the rejections infra, reference labels are generally recited only for the first recitation of identical claim language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Higashiguchi (5828128) and Geffken (6093630).

At column 7, line 48 to column 8, line 21; column 9, lines 16-48; and column 16, line 62 to column 17, line 2, Higashiguchi teaches the following:

1. A back electrode type electronic part comprising: a main body 20 including a circuit; and electrodes 24, 25 arranged for solder bumps on a back surface portion of said electronic part

Art Unit: 2814

and connected to said circuit, and wherein each of said electrodes 24 at portions of the electrode arrangement are provided for a single first solder bump 21 which is larger than second solder bumps 22 for said electrodes 25 arranged other than said corner portions.

2. A back electrode type electronic part according to 1, wherein said electrodes are arranged in a matrix, and said portions are 4 corner portions.

3. A back electrode type electronic part according to 1, wherein said group of electrodes includes a non-contact electrode which is not connected to said circuit.

7. An electronic assembly comprising:

a back electrode type electronic part
comprising:

a main body including a circuit, and

electrodes provided on a back surface

portion of said electronic part and connected to said

circuit, a printed circuit board 14 having substrate

electrodes 16 corresponding to said electrodes provided

for said electronic part, wherein one of said

substrate electrodes as a first substrate electrode is

provided for each electrodes, and said substrate electrodes as

second substrate electrodes other than said first substrate

Art Unit: 2814

electrodes are provided for said electrodes of said electronic part other than said electrodes; and solder bumps including first solder bumps connected with said electrodes and said first substrate electrodes and second solder bumps connected with said second substrate electrodes and said electrodes of said electronic part other than said electrodes.

8. A back electrode type electronic part according to 7, wherein said electrodes of said electronic part are arranged in a matrix, and said portions are 4 corner portions.

9. A back electrode type electronic part according to 7, wherein one of said electrodes is a non-contact electrode which is not connected to said circuit.

However, Higashiguchi does not appear to explicitly teach groups of said electrodes 24, and wherein said group of electrodes includes electrodes having a substantially same potential level when said circuit operates. Nonetheless, at column 2, line 27 to column 4, line 21; and column 5, lines 1-51, Geffken teaches groups of electrodes 126, 128 having a substantially same potential level when a circuit operates. Moreover, it would have been obvious to combine the product of Geffken with the product of Higashiguchi because it would provide electrodes.

Art Unit: 2814

To further clarify the teaching of Geffken wherein the group of electrodes includes electrodes having a substantially same potential level when the circuit operates, it is noted that this limitation is an inherent property of the group of electrodes of Geffken because they are electrically interconnected by the bumps.

In any case, the limitation, "electrodes having a substantially same potential level when said circuit operates," is a statement of intended function which does not result in a structural difference between the claimed product and the product of the applied prior art. Further, because the product of the applied prior art is inherently capable of functioning as intended, the statement of intended function does not patentably distinguish the claimed product from the product of the applied prior art. It is well established that the manner in which a product operates is not germane to the issue of patentability of the product; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). And, claims directed to product must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959).

"Product claims cover what a device is, not what a device does."

Art Unit: 2814

Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Claims 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Higashiguchi and Geffken as applied to claims 1-3 and 7-9 and further in combination with Sakoda (6279583 B1).

The combination of Higashiguchi and Geffken does not appear to explicitly teach the following:

4. A back electrode type electronic part according to 1, wherein one of said electrodes of said group is a signal electrode.

5. A back electrode type electronic part according to 1, wherein one of said electrodes of said group is a ground potential electrode.

6. A back electrode type electronic part according to 1, wherein one of said electrodes of said group is a power supply potential electrode.

10. A back electrode type electronic part according to 7, wherein one of said integrated electrodes of said group is a signal electrode.

11. A back electrode type electronic part according to 7, wherein one of said electrodes of said group is a ground potential electrode.

Art Unit: 2814

12. A back electrode type electronic part according to 7, wherein one of said electrodes of said group is a power supply potential electrode.

Nevertheless, at column 3, lines 63-67, Sakoda teaches an electrode 15 which is, alternatively, a signal, ground and power electrode. Furthermore, it would have been obvious to combine the product of Sakoda with the product of the combination of applied prior art because it would provide an electrode.

In any case, the intended use of the electrode as a signal, ground and power electrode does not result in a structural difference between the claimed product and the product of the applied prior art. Further, because the product of the applied prior art is inherently capable of being used as intended, the statement of intended use does not patentably distinguish the claimed product from the product of the applied prior art.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the group receptionist whose telephone number is 703-308-1782.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/305-3431.

Application/Control Number: 09/435,448

Page 9

Art Unit: 2814



David E. Graybill
Primary Examiner
Art Unit 2814

D.G.
7-Sep-01